

SECTION D.

SURVEY INSTRUMENT AND MATERIALS

National Science Foundation National Institutes of Health

FY 1999 SURVEY OF SCIENTIFIC AND ENGINEERING RESEARCH FACILITIES

The president or chancellor of your institution named the individual on the label above to coordinate data collection for this survey. Please correct any wrong information on the label.

All information that would permit identification of individuals or institutions will be kept confidential.

Contractor: Abt Associates Inc.

Technical Assistance: 1-800-xxx-xxxx

Mailing Address: ATTN: NSF Facilities Survey
55 Wheeler Street
Cambridge MA 02138

Survey Contact: Amy E. Graham, Ph.D.
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Sponsored by: National Science Foundation
National Institutes of Health

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Acting out of concerns raised by the academic community, Congress directed the National Science Foundation (NSF) to collect and analyze data about research facilities at universities and colleges and to report to Congress every two years. This survey is in response to that requirement under authorization of the National Science Foundation Act of 1950, as amended. The National Institutes of Health (NIH), cosponsor of the survey, added a sample of biomedical research organizations and independent research hospitals.

The main topics in this year's survey are:

- amount of space in your institution;
- amount and condition of research space in your institution;
- costs of capital projects completed, begun, and planned;
- deferred capital projects; and
- animal research facilities.

We will use the information that you provide for a report that gives a broad, quantitative picture of:

- the cost, availability, and condition of existing science and engineering (S&E) research facilities; and
- the current capital spending by universities and colleges, sources of funding, and plans for future repair/renovation and new construction of S&E research facilities.

Your participation in this survey is voluntary. However, your response is very important to us. Aggregate data from this report are used by Congress, the Executive Branch, many higher education associations, and university and college administrators to help make policy decisions. **NSF and NIH do not use or allow others to use detailed responses in any manner that would identify an individual institution's responses.**

This questionnaire is available on the World Wide Web (www). We strongly urge you to use the electronic version because it's more convenient and reduces the need for follow-up compared to the paper version. Go to <http://www.facilities.abtassoc.com> to access the web version of the questionnaire. Your individual Personal Identification Number (PIN) is attached to the front of this paper questionnaire.

Preparing the information and completing the paper questionnaire requires an average of 24 hours. If you wish to comment on this burden, contact Suzanne H. Plimpton, Reports Clearance Officer, NSF, via email splimpto@nsf.gov or at 703-306-1125. Or contact the Office of Management and Budget, Paperwork Reduction Project (OMB Number 3145-0101), Washington, DC 20503.

Please return the completed survey by February 1, 2000 to:

ATTN: NSF Facilities Survey
55 Wheeler Street
Cambridge MA 02138

If you have a question about a specific item in the survey, please contact Abt Associates, Inc. using the toll-free, technical assistance number: 1-800-xyz-xyzx. If you have general comments or concerns about the survey, please contact Dr. Amy Graham at 1-301-913-0553 or at Amy_Graham@abtassoc.com. Thank you for your participation.

GUIDELINES

Refer to these guidelines as you fill out the survey.

1. Electronic questionnaire

You have the option of completing this survey using an electronic version of the questionnaire. We recommend that you use this version: it's more convenient and reduces the need for follow-up. You'll have access to an online help feature, too. To access the Internet version of the survey, just go to www.facilities.abtassoc.com. Your individual PIN (personal identification number) is on the front of the questionnaire.

2. Attention: previous survey participants

If your institution participated in the last cycle of this survey, you will have access to the final data for your institution. You simply go to the study web site, www.facilities.abtassoc.com, and use your PIN to access this information. Directions at the site will tell you how. If you complete the Internet questionnaire, you can automatically enter the historical data as your response, if your institution's data have not changed.

3. The definition of research

In this survey, research is defined as all research activities of your institution that are budgeted and accounted for. Research can be funded by the institution itself, the federal government, state governments, foundations, corporations, or other sources.

4. What to include as research facilities

In this survey, the term “research facilities” *includes*:

- ☒ research laboratories;
- ☒ controlled-environment space, such as clean or white rooms;
- ☒ technical-support space, such as carpentry and machine shops;
- ☒ facilities for laboratory animals, such as animal production colonies, holding rooms, isolation and germ-free rooms;
- ☒ faculty or staff offices, to the extent that they are used for research;
- ☒ department libraries, to the extent that they are used for research;
- ☒ fixed (built-in) equipment, such as fume hoods and benches;
- ☒ single pieces of non-fixed equipment each costing at least \$1 million, such as MRI equipment; and
- ☒ leased space.

It does *not* include:

- : facilities that have been designated as federally funded research and development centers (FFRDC);
- : facilities that are used by faculty, but are not administered by the institution, such as research space at Veterans Administration or other non-university hospitals;
- : facilities that are administered by your institution but are leased to others for their use.

5. What fields to include as science and engineering (S&E) fields

Because every institution has its own way of classifying fields of study, for consistency, please use the Cross Reference chart (see pages 30-32) to classify areas of study at your institution. The Cross Reference chart identifies the departments that are included within each of the S&E fields used in this survey. The Cross Reference chart is based on the classification of academic departments used by the National Center for Educational Statistics.

Please note that if you are unable to separate data for academic departments, you may report the combined data under “Other Sciences, not elsewhere classified.” Please also list the fields that those data represent in the space provided.

For this survey, S&E fields *include*:

- ☒ Engineering
- ☒ Physical sciences
- ☒ Earth, atmospheric, and ocean sciences
- ☒ Mathematics
- ☒ Computer sciences
- ☒ Agricultural sciences
- ☒ Biological sciences
- ☒ Medical sciences
- ☒ Psychology (including educational psychology)
- ☒ Social sciences
- ☒ Other sciences, not elsewhere classified

They do *not* include:

- : law, business administration/management (except economics), humanities, history, the arts, or education (except educational psychology).

AMOUNT OF SPACE IN YOUR INSTITUTION

Instructions for completing Item 1

- Item 1 asks about square footage used for research and instruction at your institution. Space is measured in terms of net assignable square feet (NASF), as defined below.
- In determining research NASF, be sure to include leased space used by your institution for your research and any animal research space. You may estimate if exact figures are not available.
- You will have to prorate the NASF in two cases: when space is used for more than one purpose and when space is shared by different S&E fields.

If space is used for more than one purpose, prorate the NASF to reflect the proportion of use for the activity the item is asking about. For example, if space is used for S&E research only during the summer months (one-fourth of the year), then count 25% of the NASF as S&E research space.

If space is shared by S&E fields, prorate the NASF to reflect the proportion of use by each field. For example, if space is used equally for research activity in Computer Sciences and Mathematics, count 50% of the NASF as research space for Computer Sciences and 50% for Mathematics.

- To complete the survey, you must classify your institution's departments and programs into "fields." For help in classifying your programs, refer to the Cross Reference chart on pages 30-32. The chart shows each department to be included in each field.
- For institutions using a facilities inventory system based on NCES, NACUBO, or WICHE classifications, in Column 1 ("Instructional NASF"), use only the space that is assigned to functional category 1 (Instruction); in Column 2 ("Research NASF"), use only the space that is assigned to functional category 2 (Research)¹.
- **Definitions:**

net assignable square feet (NASF): Is the sum of all areas (in square feet) on all floors of a building assigned to, or available to be assigned to, an occupant for specific use, such as instruction or research. NASF should be measured from the inside faces of walls.

research: Refers to all research activities of your institution that are budgeted and accounted for. Research can be funded by the institution itself, the federal government, state governments, foundations, corporations, or other sources.

research space: Refers to the NASF of space in facilities within which research activities take place. Research space may include (to the extent the areas are used for research): research laboratories, controlled-environment space, facilities for laboratory animals, faculty and staff offices, department libraries, and space that houses fixed equipment (i.e. equipment that is built into facilities, such as fume hoods and lab benches) and pieces of non-fixed equipment costing \$1 million or more.

¹ For institutions using a facilities inventory system based on NCES, NACUBO, or WICHE, please refer to the Postsecondary Education Facilities Inventory and Classification Manual, U.S. Department of Education, Office of Educational Research and Improvement, NCES 92-165; the 1988 NACUBO Taxonomy of Functions; or the 1972 WICHE Program Classification Structure.

1a. What was the amount of NASF used for instruction and research in each of the fields listed below at the end of your FY 1999? Be sure to include leased space and animal research space. You may estimate if exact figures are not available.

Past participants: Check here if data have not changed since last submission (1998 survey) _____

S&E FIELD	Instructional NASF	Research NASF	Is any of this research space leased? (Check all that apply)
Engineering			
Physical sciences			
Earth, atmospheric, and ocean sciences			
Mathematics			
Computer sciences			
Agricultural sciences			
Biological sciences other than medical school			
Biological sciences in medical school			
Medical sciences other than medical school			
Medical sciences in medical school			
Psychology			
Social sciences			
Other sciences, not elsewhere classified Please list:			
TOTAL #1: ALL S&E FIELDS			
TOTAL #2: ALL NON-SCIENCE FIELDS [for example, law, business administration/ management (except economics), humanities, history, the arts, or education (except educational psychology)]			
TOTAL #3: GRAND TOTAL (sum of Total #1 and Total #2)			

1b. How much of the total research space for all S&E fields (Total #1 under Research NASF in the table above) is leased? If you do not know the exact amount, please provide your best estimate.

_____ NASF of leased research space

AMOUNT OF RESEARCH SPACE

Instructions for completing Item 2

- Item 2 asks about the adequacy of the amount of S&E research space for current research program commitments (in column 1). For fields with inadequate space, please also indicate the additional amount needed (in column 2). Inadequate space is defined as space that is not sufficient to support the needs of your current S&E research program commitments in the field; or non-existent, but needed.

- **New Definitions:**

research program commitments: Refers to all research and development activities of an institution that are budgeted, approved, and funded.

Research program commitments *include*:

- current faculty and staff or those to whom offers have been made,
- grants awarded, whether or not research has actually begun, and
- programs which have been approved.

Research program commitments do *not* include:

- potential staff without offers,
- grants applied for but not awarded, and
- programs designed but not yet approved.

- **Definitions to review:**

research space: Refers to the NASF of space in facilities within which research activities take place.

2. Please rate the adequacy of the amount of S&E research space available at your institution.

Past participants: Check here if data have not changed since last submission (1998 survey) _____

Key:

- A = Adequate** sufficient amount of space to support all the needs of your current S&E research program commitments in the field
- I = Inadequate** insufficient space to support the needs of your current S&E research program commitments in the field; Or non-existent, but needed
- NA = Not applicable** No space reported or needed

S&E FIELD	Column 1			Column 2
	Amount of S&E research space <i>For each field, circle the one best response</i>			If the amount of space is inadequate or is nonexistent but needed: <i>Enter additional space needed</i>
	Adequate	Inadequate	Not Applicable	Additional NASF Needed
Engineering	A	I	N/A	
Physical sciences	A	I	N/A	
Earth, atmospheric, and ocean sciences	A	I	N/A	
Mathematics	A	I	N/A	
Computer sciences	A	I	N/A	
Agricultural sciences	A	I	N/A	
Biological sciences other than medical school	A	I	N/A	
Biological sciences in medical school	A	I	N/A	
Medical sciences other than medical school	A	I	N/A	
Medical sciences in medical school	A	I	N/A	
Psychology	A	I	N/A	
Social sciences	A	I	N/A	
Other sciences, not elsewhere classified Please list:	A	I	N/A	

CONDITION OF RESEARCH FACILITIES

Instructions for completing Item 3

- Item 3 asks about the condition of S&E research facilities at your institution, where the term “facilities” is defined below. Consider only space supporting your current S&E research program commitments.
- If you have space requiring replacement, please indicate the amount of space that is funded and scheduled for replacement in your FY 2000 or FY 2001 in column 2.

- **New Definitions:**

research facilities: Refers to the space, fixed equipment, and selected pieces of expensive non-fixed equipment used to conduct research. Research facilities may include the following (to the extent that they are used for research): research laboratories, controlled-environment space, technical-support space, facilities for laboratory animals, faculty or staff offices, department libraries, fixed equipment (such as fume hoods and benches), and single pieces of non-fixed equipment each costing at least \$1 million (such as MRI equipment).

repair/renovation: Refers to both the major and minor repair/renovation of existing facilities in deteriorated condition, capital improvements on facilities, conversion of facilities, etc.

major repair/renovation: Refers to an extensive repair/renovation project that results in facilities that are equivalent, or nearly equivalent, to new facilities in their ability to support S&E research.

- **Definitions to review:**

research space: Refers to the NASF of space in facilities within which research activities take place.

research program commitments: Refers to all research and development activities of an institution that are budgeted, approved, and funded. Research program commitments *include:*

- current faculty and staff or those to whom offers have been made;
- grants awarded, whether or not research has actually begun; and
- programs which have been approved.

3. Please rate the current condition of your S&E research FACILITIES by indicating the percentage of space that falls into each category. If any of the facilities requires replacement, please indicate the amount funded AND scheduled for replacement in your FY 2000 or FY 2001.

Past participants: Check here if data have not changed since last submission (1998 survey) _____

Key:

A = Suitable for the most scientifically competitive research in the field

B = Effective for most levels of research in the field, but may require minor repair/renovation

C = Requires major repair/renovation to be used effectively

D = Requires replacement

NA = Not applicable (i.e. no research facilities in the field)

S&E FIELD	Column 1						Column 2
	Condition of research facilities						If any space requires replacement: Enter the amount funded and scheduled for replacement in your FY 2000 /2001
	Suitable for most scientifically competitive research (A)	Suitable for most levels of research (B)	Requires major repair or renovation (C)	Requires replacement (D)	Total	Not Applicable	NASF
Engineering					100%		
Physical sciences					100%		
Earth, atmospheric, and ocean sciences					100%		
Mathematics					100%		
Computer sciences					100%		
Agricultural sciences					100%		
Biological sciences other than medical school					100%		
Biological sciences in medical school					100%		
Medical sciences other than medical school					100%		
Medical sciences in medical school					100%		
Psychology					100%		
Social sciences					100%		
Other sciences, not elsewhere classified Please list:					100%		

COSTS OF CAPITAL PROJECTS

Instructions for completing Item 4

- Item 4 asks for information on repair or renovation of S&E research facilities. Consider only projects that began during your FY 1998 or FY 1999. (Consider the start-date for a project to be the date on which repair/renovation actually began.)
- Include ONLY those projects whose prorated cost is more than \$5,000 and less than or equal to \$100,000.
- **New definitions:**
 - completion costs:** Includes costs for planning; site preparation; and repair/renovation of the research space; fixed equipment; non-fixed equipment costing \$1 million or more; and building infrastructure.
 - building infrastructure:** Includes systems that exist in the building and within five feet of the building foundation, such as plumbing, lighting, air exchange, and safety systems.
- **Definitions to review:**
 - repair/renovation:** Refers to both the major and minor repair/renovation of existing facilities in deteriorated condition, capital improvements on facilities, conversion of facilities, etc.

- 4. What is the total dollar amount for completion costs of *repair/renovation* of S&E research facilities, each costing between \$5,000 and \$100,000 and begun in FY 1998 or FY 1999?**

\$ _____ Total completion costs

COSTS OF CAPITAL PROJECTS

Instructions for completing Item 5

- Items 5a and 5b ask about both repair/renovation and new construction of S&E research facilities. In both cases, include only individual projects costing over \$100,000. Do not total the cost of several small projects and report their combined costs as over \$100,000.
- Consider only projects that began during your FY 1998 or FY 1999. (Consider the start-date for a project to be the date on which repair/renovation or new construction actually began.)
- As before, if space is shared by S&E fields, prorate the NASF and cost to reflect the proportion of use by each field. For example, if space is used equally for research activity in Computer Sciences and Mathematics, count 50% of the NASF as research space for Computer Sciences and 50% for Mathematics.

- **New Definitions:**

new construction: Refers to construction of a new building or additions to an existing building.

project: Refers to a specific plan or design to construct new space, or repair/renovate or replace existing space.

- **Definitions to review:**

building infrastructure: Includes systems that exist in the building and within five feet of the building foundation, such as plumbing, lighting, air exchange, and safety systems.

completion costs: Includes costs for planning; site preparation; and repair/renovation or new construction of the research space; fixed equipment; non-fixed equipment costing \$1 million or more; and building infrastructure.

fixed equipment: Refers to equipment that is built into facilities, such as fume hoods and lab benches.

net assignable square feet (NASF): The sum of all areas (in square feet) on all floors of a building assigned to, or available to be assigned to, an occupant for specific use, such as instruction or research. NASF should be measured from the inside faces of walls.

non-fixed equipment: Refers to equipment that is not built into the facilities. Single pieces of non-fixed equipment must each cost at least \$1 million to be included in completion costs (for example, MRI equipment).

repair/renovation: Refers to the repair/renovation of existing facilities in deteriorated condition, capital improvements on facilities, conversion of facilities, etc.

5a. Did your institution have any individual new construction or repair/renovation of S&E research facilities in your FY 1998 or FY 1999 costing over \$100,000? Be sure to include animal research space.

Yes _____ (Continue)

No _____ (Skip to Item 8, page 21)

5b. Please report the completion costs and NASF for any repair/renovation or new construction of S&E research facilities costing over \$100,000. For biological and medical sciences ONLY, please also report completion costs and NASF for just those projects costing over \$500,000. (Note: The costs and NASF of the over-\$500,000 projects should be included in columns 1 through 4 as well.)

S&E FIELD	REPAIR/RENOVATION over \$100,000 begun during your FY 1998 or FY 1999		NEW CONSTRUCTION over \$100,000 begun during your FY 1998 or FY 1999		REPAIR/ RENOVATION over \$500,000 begun during your FY 1998 or FY 1999		NEW CONSTRUCTION over \$500,000 begun during your FY 1998 or FY 1999	
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
	Cost	NASF	Cost	NASF	Cost	NASF	Cost	NASF
Engineering								
Physical sciences								
Earth, atmospheric, and ocean sciences								
Mathematics								
Computer sciences								
Agricultural sciences								
Biological sciences other than medical school								
Biological sciences in medical school								
Medical sciences other than medical school								
Medical sciences in medical school								
Psychology								
Social sciences								
Other sciences, not elsewhere classified Please list:								
TOTAL #1: ALL S&E FIELDS								

5c. Did the cost of any of the repair/renovation or new construction projects include one or more pieces of non-fixed equipment, each costing over \$1 million?

Yes_____(*Continue*)

No_____(*Skip to Item 6*)

5d. List each field that had one or more pieces of non-fixed equipment, each costing over \$1 million. Then, enter the total cost of those pieces of equipment in the table.

List Name of FIELD From Page 15, Item 5b	At least one piece of non-fixed equipment costing over \$1 million in REPAIR/RENOVATION	At least one piece of non-fixed equipment costing over \$1 million in NEW CONSTRUCTION
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____
_____	\$ _____	\$ _____

COSTS OF NEW BUILDING CONSTRUCTION

Instructions for completing Item 6

- This item concerns new building construction at your institution during your FY 1998 or 1999.
- Please consider all new building construction that contains any S&E research space. However, consider the total completion costs of each new building (and not just the prorated share for construction of research space.)
- Note that this question is the ONLY question in this survey that focuses on buildings per se.

6a. Did you report any NEW CONSTRUCTION projects for S&E facilities in question 5b?

Yes_____ (*Continue*)

No_____ (*Skip to Item 7, page 18*)

6b. Did any of the NEW CONSTRUCTION work include a single building with a total project cost (based on total space, not just research space) of at least \$25 million?

Yes_____

No_____

SOURCES OF FUNDING FOR RESEARCH FACILITIES PROJECTS

Instructions for completing Item 7

- Item 7 asks about sources of funding for S&E research facilities projects in your FY 1998 and FY 1999.
- Consider only projects that began during FY 1998 or FY 1999 that cost over \$100,000. (Consider the start-date for a project to be the date on which repair/renovation or new construction actually began).
- Note that if your institution maintains a separate line in your institutional budget that identifies indirect costs recovered from federal grants and/or contracts, you should be able to answer Item 7c.
- **New Definitions:**

institutional funds: funding for research activities from the institution's operating funds, endowments, indirect costs recovered from federal grants and/or contracts, indirect costs recovered from other sources, etc.
- **Definitions to Review:**

new construction: Refers to construction of a new building or additions to an existing building.

repair/renovation: Refers to both the major and minor repair/renovation of existing facilities in deteriorated condition, capital improvements on facilities, conversion of facilities, etc.

7a. What were the various sources of funding for repair/renovation and/or new construction of S&E research facilities in your FY 1998 or FY 1999, each costing over \$100,000? Be sure to include animal research space and be sure your total is consistent with the totals you reported in 5b.

SOURCE	Column 1	Column 2
	Dollar amount for REPAIR/RENOVATION projects costing over \$100,000	Dollar amount for NEW CONSTRUCTION projects costing over \$100,000
Federal government		
State or local government		
Private donations		
Institutional funds (see definitions on page 18)		
Tax-exempt bonds		
Other debt financing		
Other sources Please list:		
TOTAL (This total should equal the sum of the totals in columns 1 and 3, Item 5b, page 15)		

7b. Can you identify the amount of indirect costs recovered from federal grants and contracts? (Note that these costs are included under "Institutional funds" above.)

Yes____(Continue)

No____(Skip to Item 8, page 20)

Not applicable, institutional funds are not a source of funds for these projects ____ (Skip to Item 8, page 20)

7c. What is the amount of indirect costs recovered from federal grants and/or contracts that is included in the "Institutional funds" (row 4) amount listed above?

SOURCE	REPAIR/RENOVATION	NEW CONSTRUCTION
Indirect costs recovered from federal grants/contracts	\$	\$

PLANNED RESEARCH FACILITIES PROJECTS

Instructions for completing Item 8

- Item 8 asks for information on PLANNED S&E research facilities projects, where “planned” means funded and scheduled but not yet begun. Item 8 also asks for the estimated completion costs for planned projects to extend, repair or renovate central campus infrastructure, which is defined below.
- Consider only projects scheduled to begin during your FY 2000 or FY 2001 whose prorated cost in a given field is over \$100,000. Estimate if exact figures are not available
- As before, if space is shared by S&E fields, prorate the NASF and cost to reflect the proportion of use by each field. For example, if space is used equally for research activity in Computer Sciences and Mathematics, count 50% of the NASF as research space for Computer Sciences and 50% for Mathematics.

- **New Definitions:**

central campus infrastructure: Refers primarily to systems that exist between the buildings of a campus (excluding the area within five feet of any individual building foundation) and to the non-architectural elements of campus design (central wiring for telecommunications systems, storage or disposal facilities, electrical wiring between buildings, central heating and air exchange systems, drains and sewers, roadways, walkways, parking systems, etc.)

planned project: Refers to a project that is funded and scheduled but on which construction has not yet begun.

- **Definitions to review:**

building infrastructure: Includes systems that exist in the building and within five feet of the building foundation, such as plumbing, lighting, air exchange, and safety systems.

fixed equipment: Refers to equipment that is built into facilities, such as fume hoods and lab benches.

net assignable square feet (NASF): The sum of all areas (in square feet) on all floors of a building assigned to, or available to be assigned to, an occupant for specific use, such as instruction or research. NASF should be measured from the inside faces of walls.

new construction: Refers to construction of a new building or additions to an existing building.

project: Refers to a specific plan or design to construct new space, or repair/renovate or replace existing space.

repair/renovation: Refers to both the major and minor repair/renovation of existing facilities in deteriorated condition, capital improvements on facilities, conversion of facilities, etc.

8a. Has your institution funded AND scheduled any individual repair/renovation or new construction of S&E research facilities in your FY 2000 or FY 2001 that cost over \$100,000?

Yes _____ (Continue)

No _____ (Skip to Item 9, page 23)

8b. Please report the estimated costs and NASF for any S&E research facilities projects funded and scheduled to begin in your FY 2000 or FY 2001 with an estimated completion cost over \$100,000.

FIELD	REPAIR/RENOVATION over \$100,000 scheduled to begin in your FY 2000 or FY 2001		NEW CONSTRUCTION over \$100,000 scheduled to begin in your FY 2000 or FY 2001	
	Estimated Cost	Estimated NASF	Estimated Cost	Estimated NASF
Engineering				
Physical sciences				
Earth, atmospheric, and ocean sciences				
Mathematics				
Computer sciences				
Agricultural sciences				
Biological sciences other than medical school				
Biological sciences in medical school				
Medical sciences other than medical school				
Medical sciences in medical school				
Psychology				
Social sciences				
Other sciences, not elsewhere classified Please list:				
TOTAL #1: ALL S&E FIELDS				
TOTAL #2: CENTRAL CAMPUS INFRASTRUCTURE (See Definitions on page 20)				
TOTAL #3: GRAND TOTAL (sum of Total #1 and Total #2)				

DEFERRED CAPITAL PROJECTS

Instructions for completing Item 9

- Item 9 seeks information on deferred S&E research facilities projects, where “deferred projects” are defined below. Item 9 further distinguishes between deferred projects that are and are not included in your institutional plan.

- **New Definitions:**

deferred project: Refers to a repair/renovation or new construction project that meets all of the following criteria:

- is necessary to meet your current S&E research program commitments,
- is not scheduled for your FY 2000 or FY 2001,
- does not have funding, and
- is neither for the purpose of developing new programs nor for expanding faculty beyond what is required to fulfill current S&E research program commitments.

institutional plan: Refers to an institution’s approved plan, including goals, strategies, steps, and budgets, for fulfilling the institution’s mission during a specific time period.

- **Definitions to Review:**

building infrastructure: Includes systems that exist in the building and within five feet of the building foundation, such as plumbing, lighting, air exchange, and safety systems.

central campus infrastructure: Refers primarily to systems that exist between the buildings of a campus (excluding the area within five feet of any individual building foundation) and to the non-architectural elements of campus design (central wiring for telecommunications systems, storage/disposal facilities, electrical wiring between buildings, central heating and air exchange systems, drains and sewers, roadways, walkways, parking systems, etc.)

fixed equipment: Refers to equipment that is built into facilities, such as fume hoods and lab benches.

new construction: Refers to construction of a new building or additions to an existing building.

repair/renovation: Refers to both the major and minor repair/renovation of existing facilities in deteriorated condition, capital improvements on facilities, conversion of facilities, etc.

9a. Does your institution have any deferred projects for repair/renovation or new construction of S&E research facilities?

Yes _____ (Continue)

No _____ (Skip to Item 10, page 25)

9b. Please report the estimated costs of all deferred projects for repair/renovation or new construction of S&E research facilities that are needed, but not scheduled for your FY 2000 or FY 2001.

FIELD	Estimated cost for deferred projects needed for current S&E research program commitments			
	REPAIR/RENOVATION Costs		NEW CONSTRUCTION Costs	
	Included in your institutional plan	Not included in your institutional plan	Included in your institutional plan	Not included in your institutional plan
Engineering				
Physical sciences				
Earth, atmospheric, and ocean sciences				
Mathematics				
Computer sciences				
Agricultural sciences				
Biological sciences other than medical school				
Biological sciences in medical school				
Medical sciences other than medical school				
Medical sciences in medical school				
Psychology				
Social sciences				
Other sciences, not elsewhere classified Please list:				
TOTAL #1: ALL S&E FIELDS				
TOTAL #2: CENTRAL CAMPUS INFRA-STRUCTURE (See definition on page 22)				
TOTAL #3: GRAND TOTAL (sum of Total #1 and Total #2)				

ANIMAL RESEARCH FACILITIES

Instructions for completing Item 10

- Item 10 asks about facilities for laboratory animals, including both housing and laboratory space, as defined below. Include as laboratory animal facilities both departmental and central facilities that are subject to government and state policies and regulations concerning humane care and use of laboratory animals.
- Do not include in your laboratory animal facilities space:
 - agricultural field buildings sheltering animals that do not directly support research or that are not subject to government regulations concerning humane care and use of laboratory animals; or
 - areas for treatment of animals that are veterinary patients.

- **New Definitions:**

animal housing NASF: Refers to all general animal housing (for example, cage rooms, stalls, wards, isolation rooms) and maintenance areas (for example, feed storage rooms, cage-washing rooms, shops, storage), if these areas directly support research. (Animal housing NASF are Codes 570 and 575 in the *Postsecondary Education Facilities Inventory and Classification Manual*.)

animal laboratory NASF: Refers to all animal laboratory space used exclusively for research activities, such as bench space, animal production colonies, holding rooms, germ-free rooms, surgical facilities, and recovery rooms.

total animal research NASF: Refers to the combined amount of animal laboratory and animal housing NASF.

10a. Does your institution have facilities for laboratory animals?

Yes _____ (Continue)

No _____ (Skip to Item 11, page 27)

10b. Below, fill in the amounts of your *animal housing NASF* and *animal laboratory NASF*. Add the two figures to arrive at your *total animal research NASF*.

_____ Animal housing NASF
+ _____ Animal laboratory NASF
= _____ Total animal research NASF

10c. Please indicate whether the total amount of animal research NASF available to your institution is adequate or inadequate. Please check (✓) the one best response.

Adequate (i.e. sufficient amount of space to support all the needs of your current S&E research program commitments in the field) _____

Inadequate (insufficient space to support the needs of your current S&E research program commitments, or non-existent, but needed) _____

If inadequate or non-existent but needed, please specify the NASF of additional space needed.

_____ NASF needed

10d. Please rate the current condition of your animal research facilities by indicating the percentage of space in each category.

	% of space
Suitable for most scientifically competitive research	
Suitable for most levels of scientific research; may require minor repair or renovation	
Requires major repair/renovation to be used effectively	
Requires replacement	
Total	100%

If any space requires replacement, how much space is funded and scheduled for replacement in your FY 2000 and FY 2001? _____ NASF

10e. Did your institution have any individual new construction or repair/renovation of facilities for laboratory animals in your FY 1998 or FY 1999, each costing over \$100,000?

Yes _____ (Continue)

No _____ (Skip to Item 10g)

10f. Please report the completion costs and NASF for any repair/renovation or new construction of facilities for laboratory animals costing over \$100,000 and begun during your FY 1998 or 1999.

	REPAIR/RENOVATION		NEW CONSTRUCTION	
	Cost	NASF	Cost	NASF
Facilities for laboratory animals				

10g. Has your institution funded and scheduled any individual new construction or repair/renovation of facilities for laboratory animals in your FY 2000 or FY 2001, each costing over \$100,000?

Yes _____ (Continue)

No _____ (Skip to Item 10i)

10h. Please fill in estimated costs and NASF for repair/renovation and new construction of facilities for laboratory animals, each costing over \$100,000 and scheduled to begin during your FY 2000 or FY 2001.

	REPAIR/RENOVATION		NEW CONSTRUCTION	
	Estimated Cost	NASF	Estimated Cost	NASF
Scheduled for 2000/2001				

10i. Does your institution have a need for specially adaptive animal research facilities? (e.g., facilities for mouse induced mutants; barrier facilities; fish research facilities; or BL-2 or BL-3 facilities for infected research animals?)

Yes _____

No _____ (Skip to Item 11, page 27)

10j. Please specify the type of specially adapted animal research facilities that your institution needs. List up to three types.

1st Type: _____

2nd Type: _____

3rd Type: _____

11. FACILITY and RESPONDENT INFORMATION

Instructions: Please answer the following questions about your facility and the respondent(s) completing this questionnaire.

11a. Are you responding on behalf of a college or university?

Yes _____ (Continue)

No _____ (Skip to question 11g)

11b. Does your university have a medical school?

Yes _____ (Continue)

No _____ (Skip to question 11e)

11c. What is the name of the medical school at your college or university?

Please write the name here: _____

11d. Did you include S&E research space in the medical school in the responses for your institution?

Yes _____

No _____

11e. Does your college or university have S&E research space on more than one campus? (Typically, each campus would have separate administrative offices.)

Yes _____ (Continue)

No _____ (Skip to question 11g)

11f. Please list the names of each campus with S&E research space and check (✓) whether you included the space at each of these campuses in the responses for your institution.

Name of Campus	Included in response (✓ means “yes”)

11g. About how many individuals (including yourself) helped to complete this questionnaire?

Number of individuals _____

11h. Please write the title of the people who spent significant time providing data to fill out this questionnaire. If you don't know the person's complete title, please give us what information you can. Please note that these titles will be removed from the database and are requested as part of our efforts to improve the survey.

Institutional coordinator_____

Title of respondent_____

Title of respondent_____

Title of respondent_____

Title of respondent_____

Please indicate approximately how many minutes it took you and anyone else involved to complete this questionnaire

Minutes

Comments:

[illegible]

Thank you very much for your participation

Return this completed questionnaire in the enclosed pre-paid envelope or mail directly to:

ATTN: NSF Facility Survey
55 Wheeler Street
Cambridge MA 02138

CROSS REFERENCE BETWEEN NSF FIELD CATEGORIES AND THE NCES CLASSIFICATION OF ACADEMIC DEPARTMENTS

Use this chart to identify the departments that are included within each of the science and engineering (S&E) fields used in this survey.

ENGINEERING

- 101 Aerospace Engineering
 - 14.02 Aerospace, aeronautical, and astronautical engineering
- 102 Agricultural Engineering
 - 14.03 Agricultural engineering
- 103 Biomedical Engineering
 - 14.05 Bioengineering and biomedical engineering
- 104 Chemical Engineering
 - 03.0509 Wood sciences
 - 14.07 Chemical engineering
- 105 Civil Engineering
 - 04.02 Architecture
 - 14.04 Architectural engineering
 - 114.08 Civil engineering
 - 14.14 Environmental health engineering
- 106 Electrical Engineering
 - 14.09 Computer engineering
 - 14.10 Electrical, electronics, and communications engineering
 - 14.1002 Microelectronic engineering
- 107 Engineering Science
 - 14.12 Engineering physics
 - 14.13 Engineering science
- 108 Industrial Engineering/Management Science
 - 14.17 Industrial engineering
 - 14.27 Systems engineering
 - 30.06 Systems science
- 109 Mechanical Engineering
 - 14.11 Engineering mechanics
 - 14.19 Mechanical engineering
- 110 Metallurgical and Materials Engineering
 - 14.06 Ceramic engineering
 - 14.18 Materials engineering
 - 14.20 Metallurgical engineering
 - 40.0701 Metallurgy
- 111 Mining Engineering
 - 14.15 Geological engineering
 - 14.16 Geophysical engineering
 - 14.21 Mining and mineral engineering
- 112 Nuclear Engineering
 - 14.23 Nuclear engineering
- 113 Petroleum Engineering
 - 14.25 Petroleum engineering
- 114 Engineering, not elsewhere classified
 - 14.01 Engineering, general
 - 14.22 Naval architecture and marine engineering
 - 14.24 Ocean engineering
 - 14.28 Textile engineering
 - 14.99 Engineering, other
 - 19.09 Textiles and clothing (excluding 19.0902, Fashion Design)
 - 30.03 Engineering and other fields

PHYSICAL SCIENCES

- 201 Astronomy
 - 40.02 Astronomy
 - 40.03 Astrophysics
 - 40.09 Planetary science
- 202 Chemistry
 - 40.05 Chemistry
- 203 Physics
 - 40.08 Physics
- 204 Physical Sciences, not elsewhere classified
 - 40.01 Physical sciences, general
 - 40.0799 Miscellaneous physical sciences, other
 - 40.099 Physical sciences, other

EARTH, ATMOSPHERIC, AND OCEAN SCIENCES

- 301 Atmospheric Sciences
 - 40.4 Atmospheric sciences and meteorology
- 302 Geosciences
 - 40.06 Geological and related sciences
 - 40.0703 Earth and planetary sciences
- 303 Ocean Sciences
 - 26.0607 Marine/aquatic biology
 - 40.0702 Oceanography
- 304 Earth, Atmospheric, and Ocean Sciences, N.E.C.

MATHEMATICS

- 402 Mathematics and Applied Mathematics
 - 06.1302 Operations research (quantitative methods)
 - 27.01 Mathematics, general
 - 27.03 Applied mathematics
 - 27.04 Pure mathematics
 - 27.99 Mathematics, other
 - 30.08 Mathematics and computer science
- 403 Statistics
 - 27.02 Actuarial sciences
 - 27.05 Statistics

COMPUTER SCIENCES

- 401 Computer Sciences
 - 06.12 Management information systems
 - 11 Computer and information sciences, general
 - 0.09 Imaging science

AGRICULTURAL SCIENCES (SEE ALSO 102 AND 901)

- 501 Agricultural Sciences
 - 02.01 Agricultural sciences, general
 - 02.02 Animal sciences
 - 02.03 Food sciences
 - 02.04 Plant sciences
 - 02.05 Soil sciences
 - 02.99 Agricultural sciences, other
 - 03.01 Renewable natural resources, general
 - 03.03 Fishing and fisheries
 - 03.05 Forestry and related sciences
 - 03.06 Wildlife management
 - 03.99 Renewable natural resources, other
 - 31.04 Water resources

BIOLOGICAL SCIENCES

- 601 Anatomy
 - 18.0201 Clinical anatomy
 - 26.0601 Anatomy
- 602 Biochemistry
 - 18.0202 Clinical biochemistry
 - 26.02 Biochemistry and biophysics
- 603 Biology
 - 26.01 Biology, general
 - 26.0604 Embryology
- 604 Biometry and epidemiology
 - 18.2202 Epidemiology
 - 26.0602 Biometrics and biostatistics
- 605 Biophysics
- 606 Botany
 - 26.03 Botany (excluding 26.0302, Bacteriology; see 611)
- 607 Cell Biology
 - 26.04 Cell and molecular biology
 - 26.0606 Histology
- 608 Ecology
 - 26.0603 Ecology
- 609 Entomology and Parasitology
 - 26.0610 Parasitology
 - 26.07102 Entomology
- 610 Genetics
 - 26.0703 Genetics, human and animal
- 611 Microbiology, Immunology, and Virology
 - 18.0203 Clinical microbiology
 - 18.1002 Allergies and endomology
 - 18.1009 Immunology
 - 26.0302 Bacteriology
 - 26.05 Microbiology
- 612 Nutrition
 - 19.05 Food sciences and human nutrition
 - 20.0108 Food and nutrition
 - 26.0609 Nutritional sciences
- 613 Pathology
 - 18.0204 Clinical pathology
 - 18.1018 Pathology
 - 26.0704 Pathology, human and animal
- 614 Pharmacology
 - 18.0206 Clinical toxicology

- 26.0612 Toxicology
- 26.0705 Pharmacology, human and animal
- 42.14 Psychopharmacology

- 615 Physiology
 - 18.0205 Physiology
 - 26.0706 Physiology, human and animal
- 616 Zoology
 - 26.0701 Zoology
 - 26.0799 Zoology, other
- 617 Biosciences, not elsewhere classified
 - 26.0699 Miscellaneous specialized areas, life sciences, other
 - 26.99 Life sciences, other

MEDICAL SCIENCES (see also 103)

- 701 Anesthesiology
 - 18.1003 Anesthesiology
- 702 Cardiology
- 703 Cancer Research/Oncology
- 704 Endocrinology
 - 26.0605 Endocrinology
 - 705 Gastroenterology
- 706 Hematology
 - 18.08 Hematology
- 707 Neurology
 - 18.1024 Neurology
 - 26.0608 Neurosciences
- 708 Obstetrics and Gynecology
 - 18.1013 Obstetrics and gynecology
- 709 Ophthalmology
 - 18.1014 Ophthalmology
 - 18.12 Optometry
- 710 Otorhinolaryngology
 - 18.1017 Otorhinolaryngology/otolaryngology
- 711 Pediatrics
 - 18.1019 Pediatrics
 - 20.0102 Child development
- 712 Preventive Medicine and Community Health
 - 18.1007 Family practice
 - 18.1022 Preventive medicine
- 713 Psychiatry
 - 18.1023 Psychiatry
 - 18.1106 Psychiatry/mental health
- 714 Pulmonary Disease
- 715 Radiology
 - 18.1012 Nuclear medicine
 - 18.1025 Radiology
 - 26.0611 Radiobiology
- 716 Surgery
 - 18.1004 Colon and rectal surgery
 - 18.1011 Neurological surgery
 - 18.1016 Orthopedic
 - 18.1021 Plastic surgery
 - 18.1026 Surgery
 - 18.1027 Thoracic surgery

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|--|--|
| <p>717 Clinical Medicine, not elsewhere classified
 18.0299 Basic clinical health sciences, other
 18.1001 Medicine, general
 18.1005 Dermatology
 18.1008 Geriatrics
 18.1010 Internal medicine
 18.1020 Physical medicine and rehabilitation
 18.1028 Urology
 18.1099 Medicine, other
 18.13 Osteopathic medicine
 18.15 Podiatry
 30.01 Biological and physical sciences</p> <p>718 Dental Sciences
 18.04 Dentistry
 18.1015 Orthodontic surgery</p> <p>719 Nursing
 18.11 Nursing (excluding 18.1106, Psychiatry/mental health; see 713)</p> <p>720 Pharmaceutical Sciences
 18.14 Pharmacy</p> <p>721 Veterinary Sciences
 18.24 Veterinary medicine</p> <p>722 Health Related, not elsewhere classified
 17.0807 Occupational therapy
 17.0813 Physical therapy
 17.0899 Rehabilitation services, other
 17.99 Allied health, other
 18.07 Health sciences administration
 18.09 Medical laboratory
 18.22 Public health
 18.99 Health sciences, other</p> <p>723 Speech Pathology and Audiology
 18.01 Audiology and speech pathology</p> | <p>907 Political Science
 44.01 Public affairs, general
 44.03 International public service
 44.04 Public administration
 44.05 Public policy studies
 44.99 Public affairs, other
 45.09 International affairs
 45.10 Political science and government</p> <p>908 Sociology
 45.05 Demography
 45.11 Sociology</p> <p>909 Sociology and Anthropology</p> <p>910 Social Sciences, not elsewhere classified
 04.03 City, community, and regional planning
 05 Area and ethnic studies
 06.06 Human resources development
 06.15 Organizational behavior
 31.03 Parks and recreational management
 43.01 Criminal justice
 44.02 Community services
 44.07 Social work
 45.01 Social sciences, general
 45.04 Criminology
 45.12 Urban studies
 45.99 Social sciences, other</p> |
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PSYCHOLOGY

- 801 Psychology
13.08 School psychology (not including Educational Psychology)
17.0801 Art therapy
42 Psychology (including Educational Psychology)

SOCIAL SCIENCES

- 901 Agricultural Economics
01.0102 Agricultural business and management
01.0103 Agricultural economics
- 902 Anthropology (Cultural and Social)
45.02 Anthropology
45.03 Archeology
- 903 Economics (except Agricultural)
06.05 Business Economics
45.06 Economics
- 904 Geography
45.07 Geography
- 905 History and philosophy of science
- 906 Linguistics
23.06 Linguistics
42.12 Psycholinguistics